

## ABSTRACT OF THE DISCLOSURE

A modulating apparatus modulates data to be transmitted according to a predetermined modulating system and generates  
5 a modulated wave, so that an optical device is driven by the modulated wave and a light-modulated wave is transmitted. As a result, an optical data communication can be realized. Since the optical device has non-linearity, a cross modulated wave is generated by the modulation of the data. However, if a carrier  
10 frequency is chosen so that the cross modulated wave does not enter a frequency band for transmitting the data, the problem of the cross modulated wave can be removed and data transmission without distortion can be achieved. The cost can be low if an LED is utilized as the optical device. Also, high-speed data  
15 transmission is possible if a multi-value modulating system is utilized.